

Summary

The Three Affiliated Tribes (Mandan, Hidatsa and Arikara Nation [MHA Nation]) propose to construct and operate a new 15,000 barrels per day clean fuels refinery and grow hay for buffalo on the Fort Berthold Indian Reservation (Reservation) located near Makoti, North Dakota. The MHA Nation would own the refinery. The proposed facility would refine synthetic crude oil from Canada into gasoline and diesel fuels.

On February 5, 2003, the MHA Nation voted to purchase the land for the proposed refinery and for additional forage crops. The MHA Nation purchased 469 acres to be used for economic development to benefit its members. The refinery would be sited on 190 acres of the property and the remaining 279 acres would be used to grow hay for buffalo on the Reservation. The buffalo would not be located at the site. The proposed location is in the northeast corner of the Reservation and Ward County. Following the purchase of the property, the MHA Nation requested that the United States Department of the Interior, Bureau of Indian Affairs (BIA) accept the property into trust status. The MHA Nation has also applied to the United States Environmental Protection Agency (EPA) for a Clean Water Act wastewater discharge permit for the refinery.

As a general matter, federal agencies, such as BIA and EPA, must comply with the National Environmental Policy Act (NEPA), including preparation of an environmental impact statement (EIS) before undertaking any major federal actions that may have a significant effect on the human environment. As Co-Lead agencies, the BIA and EPA have prepared this Draft EIS (DEIS) to analyze the environmental impacts of the following federal decisions:

- Whether the BIA should accept the 469 acre parcel into trust for the purposes of the MHA Nation's proposal to construct and operate a clean fuels petroleum refinery and to produce buffalo forage;
- Whether EPA should issue a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit for the process water discharges associated with operation of the proposed refinery.

The MHA Nation is assisting with the preparation of the EIS as a Cooperating Sovereign Nation. The U.S. Army Corps of Engineers (USACE) is a cooperating agency in the preparation of the EIS. The USACE may also use the DEIS in deciding whether to issue a Section 404 permit under the Clean Water Act for construction of the refinery. The purpose of this document is to inform the public and government agencies about the potential environmental impacts of the proposed project and alternatives. The DEIS also includes mitigation measures and identifies the environmental regulations that would apply to the facility.

On June 19, 2006, the Supreme Court announced its decision in *Rapanos v. United States* and *Carabell v. United States Army Corps of Engineers*, ___ S.Ct. ___, 2006 WL 1667087, regarding the jurisdiction of the Clean Water Act. The federal agencies are currently considering what effect, if any, the decision may have on the Clean Water Act

permitting requirements for the proposed refinery. The final Environmental Impact Statement will reflect the outcome of these deliberations.

Summary — Alternatives Analyzed in the DEIS

The DEIS analyzes the combined environmental impact of the project proponent's proposed construction action (Alternative 1) and the proponent's proposed effluent discharge action (Alternative A). The remaining construction alternatives (Alternatives 2-5) and effluent discharge alternatives (Alternatives B, C & D) are discussed in comparison to the combined Alternatives 1 and A analysis for each resource area or issue analyzed in the EIS. At this stage of NEPA analysis, BIA and EPA have not identified preferred alternatives. BIA and EPA will identify the preferred alternatives in the final EIS. The final decision(s) for each agency will be detailed in a Record of Decision issued after the FEIS. The alternatives are summarized below:

Proponent's Proposed Actions

- Alternatives 1 and A referred to as the "Proposed Actions" include the MHA Nation's proposal that BIA accept the land into trust for the petroleum refinery and buffalo forage, and that EPA issue an NPDES permit for effluent discharges associated with operation of the refinery.

Construction Alternatives

- Alternative 2 -- Accept the land into trust without construction of the proposed refinery;
- Alternative 3 -- Construction of the proposed refinery without accepting the land into trust;
- Alternative 4 -- Modification of Alternative 1 proposal was developed to reduce impacts to wetlands and revise the design of the proposed refinery to reduce regulatory requirements under RCRA (hazardous waste control law); and
- Alternative 5 -- No action.

Effluent Discharge Alternatives

- Alternative B -- Partial discharge of effluent through an NPDES permit and partial discharge of effluent through irrigation;
- Alternative C -- Effluent discharge to an Underground Injection Control (UIC) Class I well; and;
- Alternative D -- No action. Under this alternative, EPA would not issue any permits for the discharge of effluents from the proposed refinery.

Public Involvement and Areas of Concern

In September 2003, the MHA Nation held a series of informational meetings throughout the Reservation to describe the Tribes' Proposed Actions and answer questions. Formal scoping for the NEPA analysis of the proposed refinery began on November 7, 2003 with the publication of the Notice of Intent (NOI) to prepare an EIS in the *Federal Register*. Comments and issues identified in the scoping process were compiled in a draft scoping report and made available to the public for review and comment on October 1, 2004. A

public hearing was also held on November 9, 2004 to solicit public comment on the scoping report and any additional concerns regarding the environmental review of the proposed refinery.

Environmental Issues Summary

This DEIS analyzes the environmental impacts associated with the construction, operation and closure of the proposed MHA Nation refinery and production of buffalo forage. The DEIS identifies certain adverse environmental impacts that are likely to occur as a result of the project. Mitigation measures have been developed, as described in the DEIS, to reduce, control or eliminate many environmental impacts. The facility will also require several permits which will further limit environmental impacts.

The refinery construction alternatives, Alternatives 1, 3 and 4, would be combined with one of the wastewater disposal Alternatives A, B or C. Facilities that would be common to all of the refinery construction alternatives are: a tank farm to store synthetic crude and refinery products, the refining units, a loading area for trucks and railcars, a wastewater treatment plant, fire water storage ponds, an administration building, a synthetic crude pipeline from the refinery site to an existing pipeline several miles north of the proposed site, natural gas pipeline and power line. With regard to the non-construction alternatives, Alternatives 2 and 5, the environmental impact would be the same as the existing conditions. The lands would remain in agricultural use.

The potential environmental impacts associated with the refinery are expected to vary depending upon the construction alternative selected for the refinery and the selected effluent discharge alternative. A brief discussion of the types of environmental impacts analyzed in the DEIS is summarized below.

Groundwater, Soils and Spills

- Ground water occurs beneath the refinery site. Groundwater is in the underlying material called “till” which was deposited by glaciers in an approximately 100-foot thick layer. Ground water generally moves slowly in till layers due to low permeability. Depth to water in the till aquifer typically ranges from 5-15 feet. Ground water in the till appears to flow toward the southwest at about 0.4 to 2.4 ft/year. Ground water also occurs in the Ft. Union Formation, which underlies the till and the Fox Hills Formation which underlies the Ft. Union Formation.
- It is anticipated that there would be spills and leaks at the proposed refinery facility. Almost all refineries and other petrochemical facilities such as gas stations eventually have spills and leaks. The majority of spills and leaks would be completely contained within the facility and would not impact the environment. However, over time, it is expected that there would be some contamination of soils and groundwater immediately underneath the refinery site due to leaks and spills. The contamination would remain generally within the refinery site unless a major spill occurred or a series of spills and leaks occurred over time.
- Areas within the refinery storing synthetic crude or refinery products would be required to be lined and have secondary containment (e.g., berms) to hold the entire contents of storage tanks. Areas with a high potential for spills such as the loading area for trucks and railcars would also be paved and curbed which should contain most spills.

- Due to the shallow depths to water, groundwater resources in proximity to the refinery could be affected by leaks and spills. Adverse impacts to ground water withdrawn by individual well users and public supply systems are not anticipated, except for the well at the existing farm house. That well would no longer be used for drinking water after the refinery begins operating. Other individual wells are not anticipated to be impacted because of the relatively low permeability of the till underlying the refinery site. The next closest farmstead is 1/3 of a mile from the proposed refinery site.
- Communities in the area such as Makoti and Plaza located three and five miles from the proposed refinery, respectively, use ground water as a source of drinking water. However, these communities use either the Fox Hills-Hell Creek or buried valley aquifers. Water quality in these aquifers are not expected to be impacted by the proposed facility because, the buried valley aquifers do not occur in the vicinity of the refinery and the depth to the top of the Fox Hills –Hell Creek aquifer is more than 1000 feet beneath the proposed refinery location. If the alternative for wastewater disposal through an underground injection well is selected (Alternative C), the injection zone would be required to be below any aquifer that could be used for drinking water.
- Water supply for the refinery would be from a combination of sources including the Fox Hills-Hell Creek aquifer, recycled water from the refinery and run-off collected from the site. If the refinery uses the Fox Hills-Hell Creek aquifer for the majority of its water supply, there may be localized draw down in the aquifer.

Surface Water

- The site is located in the headwaters of a small unnamed tributary of the East Fork of Shell Creek which is tributary to Lake Sakakawea. With regard to effluent discharge Alternatives A and B, stormwater and treated wastewater from the refinery would be discharged at the surface. For alternative C, only stormwater would be discharged at the surface and process water would be discharged through an underground injection well.
- The proposed refinery construction alternatives would need surface water discharge permits (NPDES) for stormwater discharges and depending on the effluent discharge alternative selected, for wastewater discharges. EPA will be using this EIS to assess the environmental impact of EPA's future decision to issue or not issue a surface water discharge permit to the proposed refinery. Treated wastewater discharges from the facility would cause minor changes in existing water quality. The proposed NPDES permit would require that wastewater discharges be protective of aquatic life, drinking water, agriculture and wildlife uses. No NPDES permits would be needed for the non-construction alternatives and water quality would remain the same as existing conditions.
- Construction and operation of the proposed refinery would change the quantity and flow pattern of the drainage from the site. The paving/hardening of the refinery site would increase runoff and reduce infiltration. If the refinery collects most of the runoff for use as water supply, there would be less water flow from the site for the majority of storm events.

Solid and Hazardous Waste

- The proposed refinery would operate as a large quantity generator of hazardous waste under the Resource Conservation Recovery Act (RCRA). The facility, through the RCRA generator regulations, would be required to transport the waste to approved hazardous waste facilities for the treatment and disposal of the waste. Many of the waste streams from refineries are specifically listed under the RCRA regulations as hazardous wastes.
- All refinery construction alternatives, except for the combination of Alternatives 4 and A, would also be a Treatment Storage and Disposal (TSD) Facility under RCRA. The facility would need to obtain a TSD permit from EPA for any of these alternatives. The TSD permit includes requirements for monitoring, financial assurance, inspections and facility closure plans.
- With regard to solid waste, the facility will be required to comply with EPA “Criteria for Classification of Solid Waste Disposal Facilities and Practices” at 40 CFR Part 257.

Vegetation, Wetlands

- The portion of the site that would be used for the proposed refinery would be changed from an agricultural to industrial use.
- Both jurisdictional and non-jurisdictional wetlands exist on the proposed refinery site. Jurisdictional wetlands are those wetlands which are considered to be waters of the US for purposes of the Clean Water Act. Non-jurisdictional wetlands are isolated waters that are not subject to Clean Water Act jurisdiction.
- The USACE determined one wetland, which covers 11.7 acres in the northwest corner of the site, to be subject to Clean Water Act jurisdiction. According to the initial site plan (Alternative 1), 0.5 acres of the jurisdictional wetland would be filled by the proposed refinery. An alternative site plan (Alternative 4) has been developed in part to reduce filling of jurisdictional wetlands to 0.1 acres. A Clean Water Act Section 404 permit for the discharge of dredged or fill material would be needed from the USACE prior to construction.
- The jurisdictional wetland would be impacted by the proposed refinery. Changes in the quality and quantity of water flowing into this wetland would change the hydrology and vegetation in the wetland.
- Non-jurisdictional wetlands may also be impacted during construction of the refinery.
- Any filling of wetlands will be mitigated by the creation or restoration of additional wetlands.

Wildlife, Threatened and Endangered Species

- The United States Fish and Wildlife Service (FWS) expressed concerns about potential effects to the threatened piping plover and endangered whooping cranes from landing on open water areas in the refinery wastewater treatment facilities or colliding with overhead power lines. Mitigation measures have been developed to discourage birds from using ponds within the refinery site, including adding netting to prevent birds from landing in open tanks or ponds with oily wastewater

and placing cobbles on the sideslopes of the constructed ponds to discourage plovers from nesting. Electrical transmission lines will be constructed to minimize collision and electrocution risks to birds

Transportation

- The refinery will increase traffic on local roads and on the rail line. With the shipment of refinery products, there would be an increased probability of petroleum products spills along the pipeline corridor, transportation corridors and the rail line.

Air Quality

- Air emissions from the refinery would be minor. Potential air emissions have been modeled; demonstrating that the proposed facility would not cause any exceedances of the National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments. At this time, EPA has determined that no Clean Air Act permits will be required for the facility because the total quantity of air pollutants emitted throughout the year by the refinery are less than the regulatory thresholds for any air permits.

Human Health

- With proper operation of the refinery, potential impacts to human health are anticipated to be negligible to the general public. Pollutants or materials which would be of concern to public health would be contained within the refinery, treated to nontoxic levels or disposed of at approved hazardous waste facilities.
- During the operation of the proposed clean fuels refinery, releases of various chemicals and hazardous materials during refinery operations are the most significant concern for impacts to human health. Transporting, handling, storing, and disposing of chemicals and hazardous materials inherently poses a risk of a release to soil, groundwater, air, surface water, and sediment. Numerous regulatory programs would be implemented at the proposed facility to prevent or control potential releases such as the emergency response planning, oil spill response planning and containment measures, NPDES permits, RCRA, and OSHA requirements.
- In the remote event of a catastrophic spill or fire, there could be emissions from the facility that would be of concern to public health in the immediate area of the refinery, however, there are currently no residences or businesses located in the immediate area of the refinery site.
- The air modeling analyses show that the potential impacts of toxic air pollutants would be below levels of concern to human health outside of the proposed refinery site.
- Potential human health impacts to employees would be greater than the general public, because of the workers' proximity to chemicals and potential exposures during refinery operations. Six toxicological studies are discussed in Chapter 4 of the EIS. The studies of workers in the petrochemical industry, when taken as a whole, do not suggest clearly identifiable impacts to workers.

Environmental Justice, Socioeconomics

- Environmental Justice concerns that are raised in the DEIS include many of the issues addressed above, such as air pollution emissions the discharge of pollutants into surface waters and ground water and hazardous waste generation. The DEIS also addresses socioeconomic effects of constructing and operating a new refinery.
- Economic benefits associated with the refinery may increase the quality of life for members of the MHA Nation. However, negative effects to the quality of life may be experienced by the communities surrounding the facility due to increases in highway traffic, noise, and light pollution during construction and operation of the facility.

